

Delta Mosquito & Vector Control District

Dr. Mustapha Debboun
General Manager

1737 West Houston Avenue | Visalia, California 93291
Phone (559) 732-8606 | (877) 732-8606 | Fax (559) 732-7441

Crystal Grippin
Scientific Program Manager

Paul Harlien
Operations Program Manager

www.DeltaMVCD.org

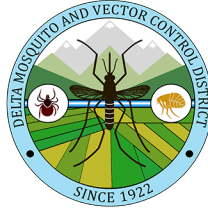
Erick Arriaga
Community Education & Outreach Coordinator

Mary Ellen Gomez
Administrative Assistant

Bryan Ferguson
Foreman

Rick Alvarez
Vector Control Supervisor

Bryan Ruiz
Supervisor Assistant



REPORT OF THE MANAGER May 2023

I. Water and Weather

The weather began to warm up in May. The Delta Mosquito and Vector Control District (DMVCD) Weather Station reported an average high temperature of 83.4°F with an average low of 57.2°F and 0.09 inches of rainfall. The National Oceanic and Atmospheric Administration 1981-2010 seasonal averages for high and low temperatures in May were 80.6°F and 55.4°F respectively, with average rainfall of 0.36 inches.

Water storage at Pine Flat Reservoir increased to 500,581 acre-feet. Pine Flat Reservoir's water inflow increased to 16,124 cubic feet per second (CFS) while its release decreased to 12,356 CFS. The Lake Kaweah Reservoir storage increased to 108,228 acre-feet. Lake Kaweah's inflow also increased to 4,281 CFS and its release decreased to 2,804 CFS.

II. Narrative

Field operations received 147 service requests in May which consisted of a Vector Control Technician inspecting the reported property for any standing water that mosquito larvae could breed in. During this time, the technician used an integrated vector management (IVM) strategy to reduce any mosquito breeding found. In addition, technicians use this opportunity to educate residents on mosquito-breeding prevention and how to protect themselves from mosquito bites and mosquito-borne diseases.

Operations are currently going out to their respective Zones treating multiple mosquito-breeding sources.

We are well above average with the number of treatments going through pesticide chemicals faster than in the previous years due to the large amounts of standing water, pockets of water pools, containers, and groundwater recharge pounds.

We are using extended-release granules due to the large areas of water and the number of acres that technicians must cover in a week. Along with utilizing all their equipment, i.e., all three Argos, Honda Pioneer, and A1 Boss Mist blowers.

We treated all the wet catch basins in Visalia, outlying towns, and will continue to monitor the catch basins for further treatment.

We are working with Federal Emergency Management Agency (FEMA) and California Office of Emergency Services (Cal OES) to seek funding support for the flood water and snowmelt runoff which will create more mosquito water-breeding sources and additional mosquito population problems as the temperature increases as seen in Figures 1 and 2. The rivers and irrigation ditches are running at high levels now and will increase soon. We had one meeting with Cal OES and three meetings with FEMA to go through the mosquito abatement funding process that is under Category B of the Emergency Protective Measures. We will continue to work with the FEMA and Cal OES Representatives to complete the funding assistance paperwork and process.



Figure 1. Example of a front view of a home in front of the flooded Kings River in Dinuba.



Figure 2. Example of a back view of the flooded Kings River in Dinuba.

Maintenance has been done on the following trucks: T-4 had the hydro boost replaced, T-27 needed two batteries, T-6 had the throttle control replaced on the A-1 super duty mist blower, and T-20 had the AC blower motor replaced.

We are working on expanding and improving the Drone Program by adding two Vector Control Technician IIIs and one Vector Control Technician I.

Routine mosquito surveillance continued through May. A total of 37,960 mosquitoes were collected across 1,435 trap nights as of May 26, 2023. The District-wide average of 26.5 mosquitoes per trap night for May was 86.0% higher than the previous 5-year average of 14.2 and 131.7% higher than the 2022 average of 11.4 mosquitoes per trap night. The top 3 mosquito species caught in May were *Culex quinquefasciatus* at 68.1%, followed by *Cx. tarsalis* at 27.8% and *Cx. stigmatosoma* at 2.9%. Compared to May of 2022, the top 3 mosquito species caught were *Cx. quinquefasciatus* at 81.2%, followed by *Cx. tarsalis* at 12.5% and *Cx. stigmatosoma* at 4.2%.

Arbovirus testing for West Nile virus (WNV), St. Louis Encephalitis virus (SLEV), and Western equine encephalitis virus (WEEV) continued in May. Laboratory staff tested 1,017 of the 1,017 mosquito samples collected as of May 26, 2023. The first West Nile virus positive mosquito sample was collected on May 17, 2023. Test results are pending for the remaining samples. No kissing bugs were reported to DMVCD so far in May 2023.

There were 53 technician and homeowner mosquitofish requests in May and a total of 2,974 mosdquito fish were distributed as of May 26, 2023. In May of 2022, there were 23 technician and homeowner mosquitofish requests and a total of 434 mosquitofish were distributed. A total of 6,516 mosquitofish fry were produced in May 2023 compared to 566 mosquitofish fry produced in May 2022.

A total of 27 mosquito larvae samples were brought to the laboratory for processing. The top three species found in the samples were *Cx. quinquefasciatus*, *Cx. tarsalis*, and a tie between *Cx. stigmatosoma* and *Culiseta inornata*. Susceptible *Cx. quinquefasciatus* and *Aedes aegypti* colonies were maintained for insecticide resistance testing.

Routine maintenance and repairs continued in May. Monthly safety checks for fire extinguishers and emergency lights were performed, as well as weekly safety shower and eyewash inspections.

In May, the DMVCD participated and attended four outreach events and three elementary school presentations including Visalia Rawhide Baseball games, and Senior Day at the Park at Mooney Grove Park in Visalia. The Rawhide baseball games in May were sold out and the turnout was great at each game. Most Board of Trustee members took their portraits at the May 8th Board Meeting, and the rest will take theirs during the June Board Meeting. In May, video and photos were taken of all the flooding areas throughout DMVCD.

The California Department of Public Health Vector Control Technician Exam for the

South San Joaquin Valley Region (SSJVR) was hosted by DMVCD on May 18, 2023. The exam was taken by 31 Vector Control Technicians from the following eight districts: Coaling-Huron Mosquito Abatement District, Delano Mosquito Abatement District, Delta MVCD, Fresno Mosquito and Vector Control District, Kern Mosquito and Vector Control District, Madera County Mosquito and Vector Control District, South Fork Mosquito Abatement District, and Tulare Mosquito Abatement District across the SSJVR.

There were 147 service requests in May 2023

2023 Service Request Summary

2023	Mosquito -Fish	Inspection	Mosquito	Source	Other	Total
January	0	0	5	0	0	5
February	1	0	4	0	0	5
March	3	0	7	0	1	11
April	12	0	83	0	0	95
May	25	0	122	0	0	147
Total	41	0	221	0	1	263

III. Vector and Disease Surveillance

Delta MVCD Summaries

Humans: No human cases of a mosquito-borne disease were reported so far in 2023.

Birds: Two dead birds were reported in May. Only one was of a testable bird species and test results are pending.

Mosquitoes: A total of 1,017 mosquito samples were tested of which one sample collected in Visalia was positive for West Nile virus. So far, 1,255 mosquito samples have been tested with one sample positive for WNV in 2023.

State Surveillance:

Humans: No WNV human cases reported so far in 2023.

Birds: As of May 26, 2023, 10 dead birds from three counties tested positive for WNV. So far, 271 dead birds have been tested in 2023.

Mosquitoes: As of May 26, 2023, three mosquito samples have positive for WNV in three counties.

IV. Expenditures & Revenues – 2022/23

TOTAL BUDGET \$4,958,310.00

EXPENDITURES – July 1, 2022 – May 31, 2023

Salaries	\$2,656,743.06
Services & Supplies	\$1,012,602.59
Tax Admin Fee	\$79,894.00

Capital	\$74,629.99
Long-Term Debt	\$58,914.03
TOTAL EXPENDITURES	\$3,882,783.67

REVENUE RECEIVED – July 1, 2022 – May 31, 2023

July	\$1,120.28
August	\$0.00
September	\$19,435.29
October	\$3,534.31
November	\$6,595.69
December	\$2,409,228.69
January	\$252,528.83
February	\$11,235.47
March	\$29,630.06
April	\$1,390,086.63
May	\$439,248.96
TOTAL REVENUE TO DATE	\$4,562,644.21

V. Timesheet Summary

Month	Available Work Hrs	Sick Hrs Used	Total Hrs Available for Work	Pct. Of Hrs Avail for Work
July	5,880	20.5	5,859.5	99.65
August	6,440	39.5	6,400.5	99.38
September	5,456	48.25	5,407.75	99.12
October	5,040	32	5,008	99.37
November	3,168	88	3,080	97.22
December	2,304	160	2,144	93.05
January	3,024	264	2,760	91.30
February	2,736	203	2,533	92.58
March	3,312	144.75	3,167.25	95.63
April	5,120	91	5,029	98.22
May	5,984	88.75	5,895.25	98.51

The DMVCD has a vacation policy that requires 24-hour notice to ensure the operational integrity of the workforce. Sick leave for doctor, dentist, and/ or family medical necessity also requires advance notice-in so much as it is possible. Illness is unplanned and therefore unscheduled. Attendance records for the current year are shown in the table.